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ABSTRACT

This report shares insights on varied experiences in action research at the university level and describes methods for involving subjects in research. Examples used include case histories of two projects: the Projet de recherche et d'intervention a la maison (PRIM), a research project on home intervention; and the Ford Teaching Project. Based on experiences in conducting a collective writing colloquium with popular educators in Quebec, seven principles are discussed which indicate that action research requires: (1) negotiation that leads to commitment; (2) an open contract; (3) a neutral quest for significance; (4) transcendence of the application of theory to practice; (5) valuing the experience of others; (6) diffusion of aggressive dialog and argument activities; and (7) living with uncertainty and the knowledge that every situation is unique. Applications of a participatory action research approach are discussed, including its use as a strategy for collecting data and writing scripts or regional research proposals, and as a project evaluation model. Conclusions address the need to use action research to bridge the gap between practice and theory. A 15-item reference list is included. (LMM)

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NEW TRENDS FOR NEW NEEDS IN
INSTRUCTIONAL TECHNOLOGY THEORY AND DEVELOPMENT

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INTRODUCTION

In the process of writing my report on action research at the end of a four-year grant, I have decided that my contribution to my AECT colleagues will be to share some insights that I have gained as a result of a broad range of experiences. I also wish to describe certain methods that have proved useful in the application of technologies demanding a great deal of participation from persons involved in a research. I offer these observations in the spirit of sharing and discussing. Thus I ask you not to consider presumptuous my announcement of new trends; they are proposed in the light of current ideas emanating from the scientific community and scholars, among them Longsheet (1982), Sussman and Evered (1978).

First I will describe the manner and extent to which the participation variable affected my process of evaluating an open model of pedagogy. I shall then indicate some lessons I have learned while investigating various action research groups at university level. For this purpose I have chosen a case history from a research of my own and two from current action research literature. The core of my exposé will be the principles about participation and action research which I distilled from conducting a collective writing colloquium with popular educators. (For term, see note (1)). Further, I will show how a participatory approach in action research can serve as a strategy for writing a script, research proposal, course outline or project evaluation.

Finally I will discuss the need to use action research to bridge the gap between practice and theory.

I The Participation Variable

Let me state here that I consider action research a worthwhile research paradigm in the field of instructional technology. In areas such as needs

assessment, curriculum development and innovation, action research is as valid and productive as the more favored systems approach, which has been considered the rational, organized and experimental mode of evaluation and revision. In the latter approach, targeted populations were relegated to the role of prospective customers rather than that of participants. My experiences have led me to support action research.

In 1973 I was faced with the dilemma of evaluating an open model of teaching without adequate instruments. Required to evaluate yet equally obliged to avoid disturbing or manipulating any variable, I turned with some of my colleagues to ethnographic tools to examine the pedagogical field and ultimately determine its significance. At the end of the research period I made a summary report, or analysis (Morin, 1979, 1980). To my astonishment, I discovered that we had omitted from our assessment process some important evaluation components. Why? We had wanted to change the environment but we had failed to involve the students as participants in the change process. Eventually we constructed a model that we called anthropopedagogical: anthropo because we were employing ethnographic tools, mainly participant observation, and pedagogical because an educator is active in the field, intervening and working as a change agent. This implies, moreover, that the teacher facilitates student involvement in both their learning environment and evaluation. If decisions are to be meaningful, they should aim to change, as often as necessary, the objects and resources in an educational setting to render it more supportive and productive. Hence students must participate in the totality of their learning experience.

I narrated and publicized my research findings in a poster session in 1979 at the AECT convention in New Orleans. I then decided to explore alternative research methods. My formative evaluation model suggested two possible directions, forcing me to deepen the epistemological roots of my position. One orientation was to function as an ethnographer in education; and the second was to focus on action research itself, that is, analysis of an action research model.

Actually I was identifying the theoretical foundations of my action research model so it might serve as more than a purely operational mode to solve immediate problems. I aimed at producing practical knowledge, or savoir-faire, which ultimately would permit an educator to perform routine tasks more easily and solve issues that consume much energy, making the work of teaching and learning more laborious than it needs to be.

On the one hand I wanted to broaden my application of ethnography in education to a broader cultural dimension; I strove to understand the link between macroscopic and microscopic views of phenomena and events. This dimension has been explored in some of the research studies I have directed, but at the present time it has not yet been associated with action research.

I was tempted also to examine the various ways action research is conducted in different parts of the world. In my search for models of action research and data analysis, I was curious to ascertain to what extent action research findings could find credibility in the scientific world. I knew that criteria for an action research paradigm would enable us to judge whether a research study remained faithful to its original methodology and whether a gain in knowledge may be expected.

Thus for four years I have lived a sort of professional schizophrenia. Half of me has aligned itself with colleagues in my field, asking me to be faithful to the definition of instructional technology expounded in my Los Angeles graduate courses (Tickton, 1971).

(Instructional technology) is a systematic way of designing, carrying out, and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and non-human resources to bring about more effective instruction. (P. 21)

The other part of me affirmed my trust in a field approach characterized by the participant-observer tradition, drawn notably from practical anthropology (Bastide, 1971). This part of me looked for ways to intervene in the field more as participant than observer, yet always preoccupied with the acquisition and production of knowledge.

Although this divided aspect of my research life is apparent in my paper, I have discovered, I think, some avenues for enriching the traditional font of instructional technology; thus I am either cured or at least en route to reconciliation. I have achieved a deeper understanding of the educational and instructional research mode. I have become better equipped, possessing both more tools and a more refined concept of action research, one which transcends pure applied research. I can suggest new ideas to enrich the systems approach and an alternate experimental paradigm.

Let me acknowledge that my comprehension of a pedagogical action has been enriched by the analytical tools furnished by certain ideas basic to anthropology. These tools have added clarity and depth to my perception.

Now my reflections may seem to state generalities but I relate them because they bring me to the conviction that one variable is omitted from too many research paradigms, namely participation. This component, which is essential in action research, is also vital in certain developmental models of instructional design. We must remember that a research study always emerges from a context, although experimentalists seem most at ease in a context-free laboratory; they are normally not preoccupied that their research findings be reintegrated with their appropriate contexts. In all types of research a certain degree of contextual participation exists but in action research context is essential.

I wish to emphasize my beliefs about context and participation, reconciling these with deductive reasoning, rationality and the systems approach.

II Lessons from the Field: Toward Reconciliation

In recent years my research experiences have been numerous and varied, both frustrating and encouraging, but always enlightening in some way or another. In this part I will discuss briefly some studies in differing action research fields at university level and the study of a collective writing experience with popular educators. I will then indicate the lessons about action research gained from these investigations, noting especially the participation variable.

2.1 Investigations in Differing Research Fields at the University Level

I have investigated several research projects that claimed a basis in either ethnomethodology or action research. Since my observations will be treated at length in another paper I will merely indicate the material pertaining to participation as seen in two case studies.

1. The PRIM

The PRIM case was a study at Université du Québec à Montréal (UQAM) called "Projet de recherche et d'intervention à la maison", or "Research Project on Intervention in the Home".

The research group dealt with a first cycle program for training special education teachers and social workers to help parents of children younger than five years to acquire the skills and evaluation expertise needed to cope with, accept and educate these children. Trainees were assigned two families each. The trainees were students who, after a few weeks of briefing, worked for several weeks with assigned families and returned to the university to share ideas and experiences. PRIM researchers tried to analyse results and weigh the program's value. They claimed that action research was their principal approach; for this reason, I decided, after reading their project, to study their model.

When we began to listen to them, we discovered that they were using an experimental paradigm and were trying to verify four hypotheses. They were also in the process of constructing measuring instruments and trying to find control groups. Their data later seemed to show no significant difference between control groups and those receiving attention. It was obvious to me, however, in the light of high parental satisfaction and trainees' enthusiasm, that a more adequate measuring instrument was lacking, one which could discern information other than behaviors.

The PRIM researchers assumed their conclusions were right because their instruments had been validated and also considered reliable. How then could they justify the expenditure of continued energy to sustain this superb practice-to-theory project? Their teaching model was action research inspired, intended to encourage interaction between society and the university to serve social needs.

We noted that even though experimental measures could detect some results, the experimental paradigm could not discern and demonstrate the changes in parental attitudes, their participation in the training and evaluation of the children, and the university students' high degree of satisfaction.

Hence we recommended more qualitative, ethnographic measures, and methods based on action research. Trainees must be encouraged to submit many examples and descriptions of their activities. We proposed that increased student participation was a major step toward improving the research model, at the same time providing more data for analysis. Ethnographic and action research methods which demand participation could offer important clues to the resolution of their research dilemma.

We delayed offering our advice, however, because a problem developed which taught us a salient lesson. The observer we sent to the PRIM became increasingly and capably involved in the management of the group, almost taking over leadership at one point. Aggressivity arose, leaving the group unsure about its identity. From that error we learned that whenever a group asks for expertise in participation or action research, negotiation is essential. The whole research group, not merely its leader, must work on what I call an open contract.

A second lesson concerns the fact that action research, although unappreciated in the scientific world, finds sympathetic acceptance from many administrators and, increasingly, with social agencies willing to grant funds.

Finally, I think it is high time we stated action research criteria so researchers will not label their methodology action research merely because they involve themselves with their subjects or carry out activities that normally do not fall under the heading of research.

2. The Ford Teaching Project

The Ford Teaching Project which originated at the University of East Anglia in England, was a genuine action research from the beginning (Adams, Elizabeth, 1980; Elliott, John, 1980). Its underlying assumption was that teachers will change their behaviors only to the extent that they are both aware and critical of the theories behind their practices. Moreover, the teachers must be implied in the construction of theories.

From elementary and secondary schools, Ford researchers recruited forty teachers who taught differing subject matters. It was accepted that increased self-knowledge would enrich the teachers' exploratory and investigative methods of teaching.

Coordination was done by a team of these researchers whose mandate was to develop methods and instruments useful in the collection of data; this central office took over the chore of making generalizations.

At the beginning only one teacher evaluated himself/herself significantly. In the end, twenty-five participants made significant changes in judging their approaches to discovery teaching methods and assessing their own personalities. Eight had dropped out of the project. The teachers' involvement led to the development of many hypotheses, some already verified and others still in the testing stage.

To me, a salient point is that the Ford paradigm demanded full participation by its subjects. Participation, then, induced changes in the teachers because they became increasingly conscious of their self-knowledge. Nevertheless, the practical theories the researchers actually observed through

behaviors and attitudes are not considered scientific truths because there are more hypotheses than totally controlled variables. The research model inspired by Lewin is a spiral wherein each pace can be observed, applied, evaluated and corrected before the next step is made: an "action circle" which in turn generates the same pattern of observation, application, assessment and correction.

The Ford research may be called a spiral: embedded in the complexities of classrooms at the elementary and secondary levels of many schools. Both effects and process are observed: in a way, the problems are observed while solutions are applied in the teaching practice. These problems may seem minor to the anthropologist or program developer. Nevertheless, just as each cell in the human organism must receive nourishment from, and communicate through membranes with other cells to avoid the growth of tumors, in the same manner each teaching problem deserves attention and solution when a need develops.

Promoters of the Ford action research model stipulate two conditions, or criteria, for proper functioning: first, the situation must relate to a teacher's field of action; and, second, the teacher must be in a position to effect changes in his or her situation.

In an action research, participation demands conditions that are linked to the action itself: if the field of action is too big it discourages involvement; if it is outside the participant's field of competence, it destroys motivation and interest.

Another important consideration in this model is that clarification of the problem is an ongoing process during the analysis phase as well as in the exploratory phase.

The second step in the Ford research, following identification, is that of "reconnaissance", which presupposes a good description of the situation to further clarify the problem. After problems are classified, this step begins to offer perspectives which were not originally foreseen. From that evolves a search for explanations and the genesis of hypothesis development.

Subsequently, working hypotheses shed light on other information. As long as hypotheses guide action, the analytic process can be maintained.

The third step is to establish a plan of action, such as determining how much one has to negotiate to implement the plan, and what resources are needed. At this stage a rational approach aimed at systematizing the action seems advisable.

Research which implies participation poses the problem of deontology. To what extent can information be diffused? The answer must be elicited from those directly involved in the project.

The Ford research model implies the use of ethnographic tools such as participant observation. In order to achieve optimum objectivity, promoters insist on the necessity of triangulation of data. Their intention is not only to corroborate points of view but also to find correspondences. Thus one can compare data from a teacher, his or her students, and an external observer.

This model, inspired by Rappaport's definition of action research, is interesting because it does not remove us too far from the search for objectivity. Yet it is adventurous, involving a search for signification, for meanings, and it permits a great sense of induction.

One may judge, however, that the knowledge generated, rich as it is, still lacks generalization. Does this really matter if it generates lessons, hypotheses for improvement and enrichment of the context of teaching models, and necessary insight into teachers' personalities and lifestyles? Such learning is insightful, useful and practical.

As I see it, however, the teachers were expected to be active participants in the Ford project, but not to the extent that we shall see in my analysis of the next case, in which the participant actors became authors.

2.2 Investigation in a Collective Writing Experience with Popular Educators

Involving subjects in all phases of an educational research is probably

an unattainable ideal. My investigation of case studies — of which I report only two here — draws attention to the fact that action research carries various definitions and serves as a vehicle for many purposes and types of studies.

My disappointment in university studies which I believed too imitative of traditional scientific models led me in 1982 to do a study that involved popular education⁽¹⁾ groups. I searched for authentic action and innovative pedagogic strategies (Morin, 1984).

My team accepted as an operational definition of action research the premise that the authors, namely, the researchers, and the actors, or practitioners, must be reciprocally involved. The authors participate in the action and the actors function to some extent as authors. Thus an action research focused on the practitioners themselves, their actions and their transactions. Its aim is to rationalize spontaneous practice. (Desorches, 1982)

If its aim is to rationalize, are we not skirting with the systems approach of developmental research, which tries to integrate and systematize human and material resources in order to promote and facilitate learning? No, we are not. While the aim is the same, the means differ. In action research auto-diagnosis is an essential antecedent to auto-prognosis. In action research, the process operates on as well as by means of the actors: they form the study group; their benefit is the research object; and only with their fullest participation can their goals be attained.

Acceptance of the need for participation may not have been recognized by university researchers because the university is a hierarchical micro-society of a wider hierarchical, though democratic, society. Further, assuming that the process of learning belongs to the learner, it is hard to believe that a student does not ultimately retain more when he or she has helped conceive, organize and assimilate material than when it all comes prepackaged. Is not evaluation also more meaningful and acceptable to the student when he or she has played a determining role?

Acting on these assumptions, we decided to become better informed about persons and self-help groups who banded together to teach themselves or solve specific problems without institutional formalities, and often without support from funding bodies. For more than a decade, popular education groups have thrived in Québec and Canada and are now organized in a national association. Some groups have a fragile existence, while others enjoy a sturdy lifespan. I had noted in their inter-group meetings they had manifested the need to record their histories and experiences. Hence my research team decided to organize a colloquium for them in which they would collectively answer that expressed desire. Recruitment of popular education practitioners would be drawn from more than six hundred groups in Québec and at least two hundred in the other nine provinces. They would become writers about their own experiences on topics that they themselves would choose.

Six months before the event we sent a preparatory questionnaire asking each prospective participant to describe his or her groups' objectives and principal activities. We requested some background information about either the person or his/her group. Writing this résumé was already a first step in writing; it also allowed people to know each other a month before the colloquium, since each participant received the résumé of workshop colleagues. Over two hundred fifty inscriptions permitted us to form fifteen collective writing workshops organized around twelve themes.

1. The Writing Techniques

We then prepared for our animators four collective writing techniques to use with the groups; each workshop was free to decide whether or not to use them. These techniques were designed to facilitate verbal exchange and writing. In addition, each workshop was assigned a resource person based on theme, as well as a participant observer who could serve as secretary.

These techniques qualify, I believe, as elements of new methodology for new trends in action research. The first technique is called the "echo-writing strategy". Its aim is to write an editorial on a given theme. The group stays together for the first hour and a half. Two persons, who agree to play the role of editorialists, take notes during the meeting. Over lunch they write a first draft or jot down analytical reflections about what has been said. Ideally the resource person meets with them too. They then read their draft or analysis to their group, which reacts, corrects, evaluates and eventually suggests the content of a second draft. One of the group's members may edit the final text. The group then continues to a second theme and a third one if time permits, using the same process.

The second technique is named the "cycle writing strategy". After a group has become acquainted it selects four questions to be answered during their two days together. Divided into four subgroups they explore these questions for thirty minutes, briefly discussing content matter and suggested titles for each question. Then each four-member subgroup assumes responsibility for one question. Two from each group stay with that question for the next two days while the other two discuss for the first hour and a half, then visit each of the other three subgroups for ninety minutes to provide feedback. The original two, meanwhile, receive members of the other subgroups in succession. All the itinerants return to their original group for the last hour and a half. They now can perceive the transformation of their initial responses and also convey ideas that have been discussed in the other three groups. A final general meeting permits them to draw up some propositions and to refine their final texts.

Although this technique seems complicated, it was used successfully by three groups at our colloquium, adapted to suit their specific needs.

The third technique, called "nucleo writing", is a traditional one, except that in a phase called feedback, two persons meet another subgroup and are replaced by two from another one.

As far as popular educators are concerned, I am sure that these techniques work; they can enable groups to express their rich experiences in a manner that can prove profitable to each other or as lessons for similar groups.

Since the techniques were prepared by instructional technologists, however, they proved a bit intimidating to some persons. Had the popular educators participated in their design, I am sure they would have been both more appropriate and smooth to apply.

2. Lessons Drawn from this Experience

As instructional technologists, we learned from this collective writing research project.⁽²⁾ Although the colloquium took two years from preparation to the publication of its acts, it offered some disappointments, quite frankly, to my team GESOE (French acronym for Group Studying Open Systems in Education). On the plus side, we gained valuable insights which may be considered guidelines for eliciting greater participation in an action research.

First Lesson: Action research demands negotiation that leads to commitment.

The first condition concerns negotiation. As university professors, or researchers, it appears preferable to be invited by the subjects to participate in an action research rather than to be initiators. A professional who has mastery over a body of pertinent scientific knowledge may conduct a satisfying and satisfactory study. But in action research, intervention by a university professor may provoke or perpetuate conflict, at least in my own province, Québec. I refer especially to groups who oppose institutions and their representatives, however sympathetic they may be. In collective writing, researchers must motivate persons to disclose their personal experiences and write about their activities; they must take enough time for sensitization. When a researcher is recognized as a competent facilitator

who will favor dialogue leading up to the final writing, he/she will be invited. In our case, we should have spent two years in long term preparation and another year of immediate work. Thus we could have achieved the goal of every action research: an open, flexible contract based on mutual reflection, congruent with the life and dynamics of the groups cooperating in the research.

It is essential that negotiation occur before, during and after an action research (Pirson, Arteel, etc. 1980). In an experience such as ours, for example, the support of the base or representative persons of target groups is vital.

These representatives should hold key jobs at the organizational level and be treated as equals, becoming as it were, in business parlance, "shareholders". Negotiation in action research leads to a special kind of contract, one which is enunciated in the next condition or principle.

Second Lesson: Action research requires an open contract.

When launching this venture we intended to put on the program only the themes or content matter suggested by members from popular education groups who answered our questionnaire. At that point our contract was open. Although we retained the questions as proposed, participants were still free to change and reorient them. However we should have intervened by trying to understand better the meanings of these suggested themes through informal meetings with some representatives; thus we could have improved the problematic aspects of each theme.

To open up a problematic issue means that one must also give the concerned party a chance to resolve it. We had invited persons to do collective writing, assuming that they understood what would be expected because we had written to them four, five or even six times about collective writing. We believed that the technical work of organizing the group experience fell

into our range of expertise. What we failed to account for was the significance of collective writing to popular educators. Inadvertently we had closed our contract before the colloquium without knowing it. This is the price a researcher can pay by not working every day in the field.

People may want to innovate but they change slowly. During the colloquium participants began to reflect on the event itself. Most of them accomplished the responsibility they had agreed upon but a third of the workshops refused to produce a written, or some form of permanent, document. (They had been provided the means of producing a statement in any media of their choice.) The lesson is clear: besides giving participants a voice in shaping the problems they will address, a second way to favor communication is to make sure that intentions and general objectives are adequately understood, accepted by all participants, and amenable to modification when necessary. Otherwise one may encounter challenge in various forms, such as argumentiveness, resistance or refusal to participate, or suspicions of manipulation. Avoiding such "adversity" is necessary to good action research, but mastery of the right strategies usually comes with experience. We recognized belatedly that not only should content be chosen in an endeavor like our colloquium, but the process leading to consensus, as well as a generous measure of initiative, must be accorded to participants.

Third Lesson: Action research must be a mutual quest for significations.

We intended the colloquium to fit into the context of a research. To be more precise, we wanted to learn about action research itself and about innovative actions and reflections. We learned more about participation through the organizational experience than from its content.

Our participants ultimately wished to exchange ideas orally, we discovered, since they attached foremost significance to dialogue. We had aimed at making them write their ideas down; it became clear that they did not

assign equal value to our intention.

Let us look at alternative research stances. The positivist view of action research is that distance must be maintained between the object and the research subject. In other words, the researcher must keep himself out of the scene as much as possible. I disagree with this viewpoint. In action research the author must go beyond pure phenomenologist knowledge, although he may be part of the dynamics, even if blurring should occur between objective and subjective poles. The action researcher wants praxeology, that is, insight about an action through experience with it. He gains understanding both from practice and in the practice itself.

Thus, the colloquium taught us new ways of implementing participative tools. The four writing techniques which we suggested were channels in which we incorporated the Desroche process (1978) to give people a chance to express their experiences, write about, evaluate and compare them, and finally suggest propositions. Our technical strategies may have seemed strange and scholarly; but our animators' handling of the techniques permitted workshopers to modify them according to specific needs. Occasionally communication was aggressive, but serious reflection leads me to believe that this release was healthy. Perhaps it was even a sign that despite individual differences and misunderstandings, the final acceptance by a group of an adjusted format did facilitate what we were hoping to achieve.

We are convinced that in future research we must choose our instrumentation with utmost care; above all, we must involve participants in every stage, as we have previously emphasized. I think this is the most satisfactory way of ensuring that we delineate our intentions so that each group will cooperate to optimum mutual advantage.

Fourth Lesson: Action research must transcend the application of theory to practice.

One unmodified idea too often voiced when practitioners or professional persons speak with university researchers is the allegedly superior value of experience over theory. Theory is considered quite useless; in contrast,

experience is blindly and confidently accepted. This generalization cries out for nuances.

Western industrial thought since Taylor is embedded with the conception of labor as a process between man and machine expressed in terms of work that is breakable into measurable units of activities. The prestige of science and technology as well as operational and systems theories have given birth to administrative management by objectives for either planning or budgetary policies. Even human relations techniques present themselves as a scientific corpus.

Curiously, the non-rational aspects of management, such as change, uncertainty, and the unique character of each situation do seem to concern its professionals. Today one hears talk about "decision in uncertainty" or "decision by intuition" (Schön, 1983). Those who voice these ideas point out the dilemma posed by rigor and relevance. The action researcher confronts opposing camps, expressing differing views of professional knowledge. He has reason to hesitate, since he is caught between acting as a theorician who excels in this domain, or as an artisan working securely within a research framework characterized by change, insecurity and uniqueness.

In such an action research group one learns, contrary to traditional instructional technology, not to be seen as an expert. One must also question the definition of resource person. Participants are true. Agreement between true resource persons researcher and an action group on this matter is essential for effective communication, since theory is not easily applied in social and educational milieux; hence the researcher cannot exert a prestigious and powerful influence based only on his theoretical knowledge. The simple reason is that the researcher has a great deal to learn. His or her ideas will eventually come to light but they comprise only one dimension of knowledge. The other dimension is offered by participants who express their needs and ideas honestly, who open up when they perceive they will be heard respectfully, and their words will not be twisted. Thus they become intermediaries and facilitators within a workshop or action research activity.

Fifth Lesson: In action research one must value the experience of others.

In our collective writing research, we made great efforts to discern the experience of others. For instance, we analysed the written texts produced by each workshop to note complementary material in a participant's background and the text he/she helped to write. We did a sentence by sentence content analysis to perceive discrepancies between experience and expression. Moreover we meticulously studied, with the help of our participant observers, the dynamics of each workshop. Had writers appropriated any suggested techniques? Did their discussions proceed according to Desroche's logical steps; that is, was the content matter titled, organized, evaluated, compared with other data, and some propositions enunciated? Did participants think logically? Was their reasoning deductive or inductive? How did their expression conform to their individual experience?

Another preoccupation arising from our colloquium is the relationship between researcher and practitioners. The latter are not so much customers but cooperators. Yet calling them cooperators and authors in a collective writing research raises questions. If they can challenge the researcher's competence and expertise do they not weaken his authority and autonomy? Moreover the researcher is not the only one searching, nor are group writers the sole authors; hence role definitions are confused. Inherent, unexpressed dilemmas point to a need for reviewing our understanding of the professional knowledge of researchers (Schön, 1983). Certainly any challenge to a researcher must be done with the practitioner's awareness of his or her specialized knowledge and experience. In return, the researcher, having constructed a constellation of meanings, must recognize the capacity of field workers to organize and assign meanings.

The researcher's actions give differing messages to receptors. He/she must take pains to make clear explanations and continue testing the perceptions within real life parameters. Participants in a research must be dialogued with as equals so that mutual understanding of events is achieved. Although

a subject may not accept the researcher as an ultimate authority, they must agree to cooperate, withhold judgment, share feelings and understandings, and reveal difficulties in comprehension. Appreciation may coincide with payment for the researcher's services. In return the latter must deliver competencies such as helping the practitioner understand and follow advice, and make his/her own actions logical to the observer's eye. Thus with self-examination and feedback the researcher will use his/her professional knowledge to best advantage in a truly open contract.

Sixth Lesson: Action research must defuse aggressive dialogue and argumentativeness.

Of one thing we are proud: during our colloquium nobody in my research team responded in kind when some participants became aggressive. We listened to grievances, responded mildly, and avoided the games a few people seemed determined to play. We believed in compromise, preferring to maintain a calm and peaceful atmosphere; further, we monitored our own failures to communicate effectively. This enabled us to read the subjects' writing objectively and to evaluate them in the most positive light. We tried to assess to what extent each workshop correctly used suggested writing strategies, and how participants' personal and popular education experiences could be traced in what they wrote. We also respected their wishes by taking six months to get explicit permission from those who wished to have their work published.

Whenever adverse positions affect communication, knowledge and education rarely advance: a negative climate precludes the disclosure and consideration of various viewpoints. There is good reason behind the saying: the harvest is poor in a storm.

With the publication of the acts I recognize that my two-year experience has not only enriched my team but made us better action researchers. Moreover the colloquium obviously has helped at least one subject group: after eight members of a senior citizen group attended the colloquium — each of them working in a different workshop — they were able to use one of the most complex writing strategies to collectively write up their grant request.

Seventh Lesson: Action research demands living with uncertainty and the knowledge that every situation is unique.

Whenever one begins an action research he/she encounters the risks of its dynamics, despite enlightened planning. Moreover one cannot predict ancillary events, in our case such things as last-minute cancellation by a major speaker, an imminent strike that forced us to plan alternate facilities if our university closed, reduced access to support staff, and some participants who were abrasive and stridently vocal. Challenges from circumstances and participants whose goodwill is presumed in an invitational conference for quasi-professionals is unsettling. Thus one must adjust to change on short notice and resolve little problems before they get out of hand.

We attempted all that at our colloquium. The fifteen workshops began well, but only ten achieved our goal for them, producing a collective document. As a researcher I tried to understand the variables. Was resistance due to rain, fatigue, personality conflicts, the after-effects of our wine and cheese, differing expectations, or the level of animators' competence? Or did the ingenuous zeal of a few who were promoting causes, and who read institutional manipulation into the structures, divert and subvert their peers? I believe, after careful analysis, that these persons deliberately deranged us. This was a factor we had not anticipated.

Nevertheless, responsibility for cooperative and relevant exchanges lay with the animators, whose capacities for dealing with difficult participants naturally varied. We were well served by fifteen competent animators, some of them superbly gifted, experienced, and renowned. Most probably the caliber of each animator played a decisive role, given the circumstances.

To sum up, participation is vital if the researcher wants to satisfy clients, engage them fully in their own learning process, and expand a research dimension to its fullest potential. As I noted earlier, the extraordinary PRIM project failed to elicit significant data because, I believe, researchers failed to modify their strategies with the help of the social workers, special education teachers and parents of the learning disabled children.

The Ford Teaching Project, on the other hand, realized rather successfully an action research design that involved observers, coordinators, teachers and their students. It may not have been the ideal action research, eliciting participation at all levels, but it achieved a degree of participation and subsequent research findings that was satisfactory in the light of original agreements and goals.

My collective writing colloquium, conceived as an investigation as well as a supportive mechanism for, and affirmation of, popular educators, turned out to be an action research that taught us a great deal about the process of action research itself, as well as the strategies of collective writing. In asking the actors to become authors we had given primacy to participation.

Thus I have begun to consider participation so important I am asking these questions: Is participation the essence, or heart, of action research? How then can an action research be scientific? Generalizable? Objective? Since these are serious considerations, I propose that we develop an action research paradigm that will gain acceptance and recognition by instructional technologists. Although it may borrow liberally from experimental research and ethnographic approaches, it must have its own characteristics and criteria. This paradigm could serve a complementary function to the developmental or systematic approach used by some of us in research.

III Some Applications of Action Research

3.1 As a technology for collecting data and writing a script.

Action research may be a useful vehicle in the area of research and development. A few years ago I directed a graduate study about writing television scripts aimed at affecting the socio-political attitudes of teenagers. A first script was written with the help of adult experts, and the show received average ratings. Then some teenagers animated by my graduate student wrote a script based on the same ideas stressed in the adult-generated script. They participated simply and wholeheartedly, producing a program similar in plot but significantly different in language, setting, impact and implications; it was also perceived as the more interesting program. My point is this: a participatory device need not cost a great deal. What it does need is time during which the agent can become familiar with a targeted milieu and win the people's acceptance. One further advantage is the positive social value of such an endeavor, which flows from the assumption that it is possible to impact on difficult subjects such as socio-political attitudes in teenagers.

3.2 As a Technology for Writing a Regional Research Proposal

This fall I was invited to work with twenty doctoral students in education from a remote region 500 miles northwest of Montréal. My assignment was to spend one day with them and pick up enough data to formulate for them a research project dealing with structural development in educational research aimed at ameliorating conditions in an underpopulated area crippled by unemployment. During the preparatory week before my trip, the participation concept nagged me. I knew that at the university we could prepare a well-structured proposal for them, trying to incorporate their ideas; but we ran the risk of dampening or extinguishing the students' enthusiasm and determination if they did not identify with the content and projected budget. My task was to meet this challenge in six hours.

I thus considered the students' strengths: each had developed an individual project and, moreover, functioned within a four-member group which in the previous year had written a small group proposal as a serious exercise. Their themes ranged from strategies in education, socio-economic influences on teaching, and the teaching-learning situation to post-secondary and university studies in education. Capitalizing on the background efforts of these four subgroups, I determined to produce a unified, structural synthesis based on their previous analyses and proposals.

En route I devised this strategy: we would play a sort of card game, dividing into two subgroups, with partners coming from each of the four nuclear cells. We would start with a title prepared by the staff of the professor responsible for this off-campus project. Students would discuss the following topics: justification of their title and theme objectives; identification of specific problems; methodology and research plans; and budget needs.

For our game we needed only scissors, transparent tape and a supply of white paper. Under the headings of theme, objectives and problem areas, each group affixed on white paper the general statements expressed in earlier proposals. They also added new reflections. After 45 minutes we held a plenary session during which progress and observations were shared. Thus we continued until 5 pm, both exhausted and satisfied. I returned to Montréal with "rushes", or rough copies, of two proposals from which the project director made a montage. Our efforts proved worthwhile, for after the proposal was written, the students sent a letter congratulating the director that their ideas had been respected. Although these participants may not receive their requested allocation, they have expressed their real needs, and they will work to resolve them even if dispensors of grants fail to give them priority status now.

I am happy to report that they have recently begun to raise funds rather than wait for the government assistance that is always tenuous.

You may remark that action research is more like a pedagogy than a research design. My response is that its model does ~~not~~ blend into, or merge with, a pedagogy. For this reason action research, although effective, is not an easy strategy to promote and perform.

3.3 As an Evaluation Model

In my research on open pedagogy I carried out what I termed anthropopedagogy (Morin, 1980). As indicated earlier in this paper, student-teacher cooperation in a university course based on an open system was possible at many stages, and students participated in revisions whenever they seemed necessary and productive. This strategy is rather easy but it can readily be neglected or dismissed by professors.

I now believe that an enlarged anthropopedagogical model can encompass the needs assessments of courses, appraisal of cultural elements in one's immediate society, and macroscopic projections on a wider scale. By themselves, however, these efforts are insufficient: such research alone cannot produce the knowledge we need in today's complex world. In our search for significations and models we must borrow tools from anthropology, since we are pedagogues whose duty is to benefit and try to transform the younger members of society. We seek not to impose but enlighten, conscientize and teach students how to operationalize.

CONCLUSION

I do not wish to imply that conducting action research studies will assist a university professor hopeful of gaining a hard-earned promotion. Quite the contrary. Nevertheless, one who has enough conviction, tenure, tenacity, and concern for enriching education should consider working with the action research paradigm as a means of bridging the gap between

educational theory and practice. Perhaps we can talk more often about participatory research, as do researchers from OISE (Ontario Institute for Studies in Education); maybe we should invent more multidisciplinary concepts, such as anthropopedagogy. At least we can work toward establishing the characteristics of action research, as Guba has clarified the ¹⁴³nationalistic paradigm.

Hence I expect to publish in the near future a list of criteria concerning action research; they will appear in a French-language scientific review. Some writers, like Lerbet (1982), have tried to reconcile systems and action research approaches, but I believe that, despite these efforts, action research by itself is useful for the following reasons:

1. It forces us to review the relationship between theory and practice;
2. It allows us to uncover systems of thought and action through exploration;
3. It obliges us to review the roles of the researcher ~~and his/her subjects;~~ *as author and inter;*
4. It transforms the instructor, or professor, as well as the student, into a communicator reflecting on real experience (Morin, 1979);
5. It can complement the development of audiovisual material especially geared to its specific audience (Kfoury, 1983); and
6. Above all, it helps us grasp the significance of multiple educational behaviors in a social context, whether in or out of a formal school setting.

What makes action research appealing is that it aims at change through reciprocal transformation of action and knowledge.

The spontaneous action of an individual acquires strength from a group and provokes participatory endeavours in others.

Intuitive knowledge favors enlightened, involved dialogue. Action research, which necessitates a formal or nonformal open contract, implies cooperative participation that ideally leads to group consensus and decisions.

Today's tendency toward conservatism in attitudes as characterized in governmental leadership may signal the need for teachers — especially technologists — to use resources and teaching models that can easily be neglected. We can partially compensate for the diminution of certain freedoms and opportunities by promoting responsibility in students. A major means is to stress participation.

NOTES

- (1) Popular education refers to persons in nonformal educational practice promoting learning which is linked to real life experience and needs. During a 1981 Québec convention popular education was defined as the totality of learning strategies and critical reflections by which citizens act together toward a greater individual and collective conscientiousness regarding their life and working conditions. Their aim, in the short, medium or long term, is social, economic, cultural or political transformation of a milieu. M. Ouellette, *Éducation populaire: Loisir et Culturel, et la politique. Loisir et Société*, vol. 4, no 1, 1981.
- (2) Groupe d'éducation populaire en collaboration avec André Morin. L'écriture collective. Un modèle de recherche-action. Chicoutimi, Gaëtan Morin éditeur, 1984.

REFERENCES

- ARTEEL, P., FACHE, W., VAN TERNBERGHE, H., VERHELLEN, E.
 "La collaboration dans la recherche-action". Actes du colloque: Méthodologie et pratique de la recherche-action. Bruxelles, 9-11 décembre 1980; C.1-C.75.
- BASTIDE, Roger. L'anthropologie appliquée, Paris, Payot, 1971.
- DESROCHE, Henri. "Les auteurs et les acteurs. La recherche coopérative comme recherche-action". Archives des Sciences Sociales de la Coopération et du Développement. Janvier-mars 1982, pp. 39-64.
- DESROCHE, Henri. Apprentissage 2, Éducation permanente et créativité collective. Paris, Editions ouvrières, 1978.
- "Instructional Technology Today", To Improve Learning. Volume 1, R.R. Bowkers Company, New York, 1970, pp. 21-22.
- KFOURY, Sélim. Un procédé de construction d'un modèle d'émission télévisuelle de nature à favoriser la formation socio-politique des adolescents. Thèse de doctorat, non publiée. Sciences de l'éducation, Université de Montréal, 1983.
- LERBET, Georges. "Approche systémique et recherche-action". Archives des Sciences sociales de la Coopération et du Développement. Janvier-mars 1982, pp. 65-77.

LONGSHEET, W.S. "Action Research: A Paradigm". The Educational Forum. Winter 1982, 46, 2, pp. 135-158.

MORIN, André. Activités du GESOE: recherche sur la recherche-action et propositions opérationnelles. GESOE, Technologie éducationnelle, Université de Montréal, 1982.

MORIN, André. "An Anthropological Model of Evaluation Applied to a Media Course in an Open System of Learning" Media Message, 1980, 9, 4: 16-23.

MORIN, André. Étude évaluative anthropopédagogique de systèmes ouverts en pédagogie universitaire. GESOE, Technologie éducationnelle, Université de Montréal, 1979.

MORIN, André, SHELTON, Danielle. La recherche-action et le PRIM (projet de recherche et d'intervention à la maison). GESOE. Technologie éducationnelle, Université de Montréal, 1983.

PIRSON, R., PIRSON-DECLERC, J., DELOUX, Y. "Les méthodes d'intervention en recherche-action" Actes du colloque: Méthodologie et pratique de la recherche-action. Bruxelles, 9-11 décembre 1980; DI-D75.

SCHÖN, D.A. The Reflective Practitioner. How Professionals Think in Action. New York, Basic Books, 1983.

SUSMAN, G.I. and EVERED, R.D. "An Assessment of the Scientific Merits of Action Research". Administrative Science Quarterly. December 1978, 23, pp. 582-602.